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KT

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AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method of managing electronic mail, the method comprising the computer-implemented steps of:

automatically generating certain criteria based on contents of a plurality of electronic mail messages received over a network;

wherein the step of automatically generating certain criteria includes:

automatically determining what particular content to use to identify electronic mail messages as a first type of electronic mail message by performing steps that include determining that a threshold number of said plurality of electronic mail messages have a particular content, and

in response to determining that a threshold number of said plurality of electronic mail messages have said particular content, generating one or more criteria that identifies electronic mail messages that have said particular content as the first type of electronic mail;

receiving an electronic mail message over said network;

determining whether said electronic mail message satisfies said one or more criteria;

if said electronic mail message satisfies said one or more criteria, then processing said electronic mail message as said first type of electronic mail;

if said electronic mail message does not satisfy said one or more criteria, then processing said electronic mail message as a second type of electronic mail;

wherein said first type of electronic mail is processed differently than said second type of electronic mail; and

23 wherein at least one electronic mail message of said plurality of electronic mail messages
 24 has not been classified, before determining that a threshold number of said
 25 plurality of electronic mail messages have a particular content, as belonging to
 26 said first type.

1 2. (Previously Presented) The method of Claim 1 wherein:
 2 the method further comprises the step of generating a message signature for said
 3 electronic mail message based on contents of said electronic mail message; and
 4 the step of determining whether said electronic mail message satisfies one or more
 5 criteria is based on said message signature.

1 3. (Previously Presented) The method of Claim 1, wherein determining that a threshold
 2 number of said plurality of electronic mail messages have a particular content includes
 3 determining that at least a portion of each of said plurality of electronic mail messages
 4 have said particular content.

1 4. (Previously Presented) The method of Claim 1, wherein the step of generating certain
 2 criteria based on contents of a plurality of electronic mail messages received over said
 3 network includes tracking how many message signature elements of said plurality of
 4 electronic mail messages match.

1 5. (Previously Presented) The method of Claim 1 wherein the step of generating certain
2 criteria based on contents of a plurality of electronic mail messages received over said
3 network includes the steps of:
4 generating message signatures for each electronic mail message of said plurality of
5 electronic mail messages, wherein each message signature includes one or more
6 message signature elements; and
7 counting how many of said one or more message signature elements match message
8 signature elements from other message signatures.

1 6. (Previously Presented) The method of Claim 5 wherein the step of determining whether
2 said electronic mail message satisfies said one or more criteria includes determining
3 whether a message signature generated for said electronic mail message includes at least
4 one message signature element that matches a threshold number of message signature
5 elements of previously generated message signatures.

1 7. (Previously Presented) The method of Claim 6 wherein the step of determining whether a
2 message signature generated for said electronic mail message includes at least one
3 message signature element that matches a threshold number of message signature
4 elements further includes determining whether a message signature generated for said
5 electronic mail message includes at least one message signature element that matches a
6 threshold number of message signature elements of previously generated message
7 signatures that are associated with a period of time.

8. (Original) The method of Claim 1 wherein the step of processing said electronic mail message as a first type of electronic mail includes adding a bulk electronic mail flag to said electronic mail message.

9. (Original) The method of Claim 8, further including the steps of:
 after processing said electronic mail message as a first type of electronic mail,
 transmitting said electronic mail message to an electronic mail server;
 said electronic mail server receiving said electronic mail message;
 said electronic mail server determining whether said electronic mail message contains
 said bulk electronic mail flag; and
 if said electronic mail message contains said bulk electronic mail flag, then processing
 said electronic mail message without further verifying whether said electronic
 mail message is bulk electronic mail.

10. (Currently Amended) A method of managing electronic mail, the method comprising the steps of:
 a central server receiving message signatures from a set of electronic mail servers;
 automatically determining what particular content to use to identify electronic mail
 messages as bulk electronic mail by performing steps that include determining
 that a threshold number of message signatures received by said central server
 from said set of electronic mail servers match;
 in response to determining that a threshold number of message signatures received by
 said central server from said set of electronic mail servers match, generating a set

of one or more criteria that identifies electronic mail messages that have said particular content as bulk electronic mail;

an electronic mail server determining whether a particular message signature for an electronic mail message satisfies said set of one or more criteria;

if said particular message signature satisfies said set of one or more criteria, then said electronic mail server processing said electronic mail message as bulk electronic mail;

wherein said threshold number of message signatures are generated from a plurality electronic mail messages; and

wherein said plurality of electronic mail messages include at least one message that has not been identified, as bulk electronic mail, before determining that a threshold number of message signatures received by said central server from said set of electronic mail servers match.

11. (Canceled)

12. (Currently Amended) The method of Claim 10, wherein the step of a central server receiving from an electronic mail server message signatures includes receiving a set of one or more values generated by a one-way hash function.

13. (Original) The method of Claim 12, the method further including the step of transmitting one or more messages to said electronic mail server specifying changes to one or more routines invoked by said electronic mail server to generate message signatures.

14. (Original) The method of Claim 13, wherein the step of transmitting one or more messages includes transmitting platform-independent byte code.

15. (Currently Amended) A method of managing electronic mail transmitted over a network, the method comprising the steps of:

a central server receiving from a set of electronic mail servers certain message signatures generated from a plurality electronic mail messages received by said set of electronic mail servers, wherein each message signature of said certain message signatures includes one or more message signature elements;

said central server generating a count of how many times said one or more message signature elements are matched by message signature elements from message signatures generated for other electronic mail messages of said plurality of electronic mail messages;

automatically determining what particular content to use to identify electronic mail messages as a first type of electronic mail message by performing steps that include determining that a threshold number of said plurality of electronic mail messages have a particular content based on said count; and in response to determining that a threshold number of said plurality of electronic mail messages have said particular content, generating one or more criteria that identifies electronic mail messages that have said particular content as the first type of electronic mail;

wherein at least one message of said plurality of electronic mail messages has not been classified, before determining that a threshold number of said plurality of

22 electronic mail messages have a particular content, as belonging to said first type;
 23 and
 24 said central server transmitting a message reflecting said one or more criteria.

1 16. (Previously Presented) The method of Claim 15, wherein:
 2 the step of a central server receiving includes receiving a particular recipient signature
 3 associated with a particular message signature; and
 4 the step of generating counts includes generating counts of how many times said one or
 5 more message signature elements match message signature elements that are:
 6 generated for other electronic mail messages, and
 7 associated with a recipient signature that differs from said particular recipient
 8 signature.

1 17. (Canceled)

1 18. (Currently Amended) The method of Claim 16, wherein the step of transmitting messages
 2 includes transmitting message signature elements associated with counts greater than a
 3 threshold.

1 19 - 25. (Canceled)

1 26. (Currently Amended) A computer-readable medium carrying one or more sequences of
 2 one or more instructions for managing electronic mail, wherein the execution of the one

or more sequences of the one or more instructions causes the one or more processors to perform the steps of:

automatically generating certain criteria based on contents of a plurality of electronic mail messages received over a network;

wherein the step of automatically generating certain criteria includes:

automatically determining what particular content to use to identify electronic

mail messages as a first type of electronic mail message by performing

steps that include determining that a threshold number of said plurality of

electronic mail messages have a particular content, and

in response to determining that a threshold number of said plurality of electronic

mail messages have said particular content, generating one or more criteria

that identifies electronic mail messages that have said particular content as

the first type of electronic mail;

receiving an electronic mail message over said network;

determining whether said electronic mail message satisfies said one or more criteria;

if said electronic mail message satisfies said one or more criteria, then processing said

electronic mail message as said first type of electronic mail;

if said electronic mail message does not satisfy said one or more criteria, then processing

said electronic mail message as a second type of electronic mail;

wherein said first type of electronic mail is processed differently than said second type of

electronic mail; and

wherein at least one electronic mail message of said plurality of electronic mail messages

has not been classified, before determining that a threshold number of said

27 plurality of electronic mail messages have a particular content, as belonging to
 28 said first type.

1 27. (Previously Presented) The computer-readable medium of Claim 26 wherein:
 2 the computer-readable medium further comprises sequences of instructions for
 3 performing the step of generating a message signature for said electronic mail
 4 message based on contents of said electronic mail message; and
 5 the step of determining whether said electronic mail message satisfies said one or more is
 6 based on said message signature.

1 28. (Previously Presented) The computer-readable medium of Claim 26 wherein determining
 2 that a threshold number of said plurality of electronic mail messages have a particular
 3 content includes determining that at least a portion of each of said plurality of electronic
 4 mail messages have said particular content.

1 29. (Previously Presented) A computer-readable medium carrying one or more sequences of
 2 one or more instructions for managing electronic mail, wherein the execution of the one
 3 or more sequences of the one or more instructions causes the one or more processors to
 4 perform the steps of:
 5 a central server receiving message signatures from a set of electronic mail servers;
 6 automatically determining what particular content to use to identify electronic mail
 7 messages as bulk electronic mail by performing steps that include determining
 8 that a threshold number of message signatures received by said central server
 9 from said set of electronic mail servers match;

in response to determining that a threshold number of message signatures received by said central server from said set of electronic mail servers match, generating a set of one or more criteria that identifies electronic mail messages that have said particular content as bulk electronic mail;

an electronic mail server determining whether a particular message signature for an electronic mail message satisfies said set of one or more criteria;

if said particular message signature satisfies said set of one or more criteria, then said electronic mail server processing said electronic mail message as bulk electronic mail;

wherein said threshold number of message signatures are generated from a plurality of electronic mail messages; and

wherein said plurality of electronic mail messages include at least one message that has not been identified, as bulk electronic mail, before determining that a threshold number of message signatures received by said central server from said set of electronic mail servers match.

30. (Canceled)

31. (Currently Amended) A computer-readable medium carrying one or more sequences of one or more instructions for managing electronic mail, wherein the execution of the one or more sequences of the one or more instructions causes the one or more processors to perform the steps of:

a central server receiving from a set of electronic mail servers certain message signatures generated from a plurality of electronic mail messages received by said set of

7 electronic mail servers, wherein each message signature of said certain message
 8 signatures includes one or more message signature elements;
 9 said central server generating a count of how many times said one or more message
 10 signature elements are matched by message signature elements from message
 11 signatures generated for other electronic mail messages of said plurality of
 12 electronic mail messages;
 13 automatically determining what particular content to use to identify electronic mail
 14 messages as a first type of electronic mail message by performing steps that
 15 include determining that a threshold number of said plurality of electronic mail
 16 messages have a particular content based on said count; and
 17 in response to determining that a threshold number of said plurality of electronic mail
 18 messages have said particular content, generating one or more criteria that
 19 identifies electronic mail messages that have said particular content as the first
 20 type of electronic mail;
 21
 22 wherein at least one message of said plurality of electronic mail messages has not been
 23 classified, before determining that a threshold number of said plurality of
 24 electronic mail messages have a particular content, as belonging to said first type;
 25 and
 26 said central server transmitting a message reflecting said one or more criteria.
 27

38. (Previously Presented) The computer-readable medium of Claim 26 wherein the step of generating certain criteria based on contents of a plurality of electronic mail messages received over said network includes tracking how many message signature elements of said plurality of electronic mail messages match.

39. (Previously Presented) The computer-readable medium of Claim 26 wherein the step of generating certain criteria based on contents of a plurality of electronic mail messages received over said network includes the steps of:
generating message signatures for each electronic mail message of said plurality of electronic mail messages, wherein each message signature includes one or more message signature elements; and
counting how many of said one or more message signature elements match message signature elements from other message signatures.

40. (Previously Presented) The computer-readable medium of Claim 39 wherein the step of determining whether said electronic mail message satisfies said one or more criteria includes determining whether a message signature generated for said electronic mail message includes at least one message signature element that matches a threshold number of message signature elements of previously generated message signatures.

41. (Previously Presented) The computer-readable medium of Claim 40 wherein the step of determining whether a message signature generated for said electronic mail message includes at least one message signature element that matches a threshold number of

message signature elements further includes determining whether a message signature generated for said electronic mail message includes at least one message signature element that matches a threshold number of message signature elements of previously generated message signatures that are associated with a period of time.

42. (Previously Presented) The computer-readable medium of Claim 26 wherein the step of processing said electronic mail message as a first type of electronic mail includes adding a bulk electronic mail flag to said electronic mail message.

43. (Previously Presented) The computer-readable medium of Claim 42, the steps further including

after processing said electronic mail message as a first type of electronic mail,

transmitting said electronic mail message to an electronic mail server;

said electronic mail server receiving said electronic mail message;

said electronic mail server determining whether said electronic mail message contains

said bulk electronic mail flag; and

if said electronic mail message contains said bulk electronic mail flag, then processing

said electronic mail message without further verifying whether said electronic mail message is bulk electronic mail.

44. (Previously Presented) The computer-readable medium of Claim 29, wherein the step of a central server receiving from an electronic mail server message signatures includes receiving a set of one or more values generated by a one-way hash function.

45. (Previously Presented) The computer-readable medium of Claim 44, the steps further including the step of transmitting one or more messages to said electronic mail server specifying changes to one or more routines invoked by said electronic mail server to generate message signatures.

46. (Previously Presented) The computer-readable medium of Claim 45, wherein the step of transmitting one or more messages includes transmitting platform-independent byte code.

47. (Previously Presented) The computer-readable medium of Claim 31, wherein:
the step of a central server receiving includes receiving a particular recipient signature associated with a particular message signature; and
the step of generating counts includes generating counts of how many times said one or more message signature elements match message signature elements that are:
generated for other electronic mail messages, and
associated with a recipient signature that differs from said particular recipient signature.

48. (Canceled)

49. (Currently Amended) The computer-readable medium of Claim 47, wherein the step of transmitting messages includes transmitting message signature elements associated with counts greater than a threshold.

1 50. (Currently Amended) A method of managing electronic mail, the method comprising the
2 computer-implemented steps of:
3 automatically generating certain criteria based on contents of a plurality of electronic
4 mail messages received over a network;
5 wherein the step of automatically generating certain criteria includes, in response to
6 determining that a threshold number of said plurality of electronic mail messages
7 have a particular content, generating one or more criteria that classifies electronic
8 mail messages that have said particular content as a first type of electronic mail;
9 receiving an electronic mail message over said network;
10 determining whether said electronic mail message satisfies said one or more criteria;
11 if said electronic mail message satisfies said one or more criteria, then processing said
12 electronic mail message as said first type of electronic mail;
13 if said electronic mail message does not satisfy said one or more criteria, then processing
14 said electronic mail message as a second type of electronic mail;
15 wherein said first type of electronic mail is processed differently than said second type of
16 electronic mail;
17 wherein the step of determining that a threshold number of said plurality of electronic
18 mail messages have a particular content includes the steps of:
19 generating message signatures for each electronic mail message of said plurality
20 of electronic mail messages, wherein each message signature includes one
21 or more signature elements, and

22 counting how many of said one or more signature elements match signature
 23 elements from other message signatures; and
 24 wherein at least one electronic mail message of said plurality of electronic mail
 25 messages has not been classified, before determining that a threshold number of
 26 said plurality of electronic mail messages have a particular content, as belonging
 27 to said first type.

28

1 51. (Previously Presented) The method of Claim 50 wherein the step of determining whether
 2 said electronic mail message satisfies said one or more criteria includes determining
 3 whether a message signature generated for said electronic mail message includes at least
 4 one signature element that matches a threshold number of signature elements of
 5 previously generated message signatures.

1 52. (Previously Presented) The method of Claim 51 wherein the step of determining whether
 2 a message signature generated for said electronic mail message includes at least one
 3 signature element that matches a threshold number of signature elements further includes
 4 determining whether a message signature generated for said electronic mail message
 5 includes at least one signature element that matches a threshold number of signature
 6 elements of previously generated message signatures that are associated with a period of
 7 time.

1 53. (Currently Amended) A computer-readable medium carrying one or more sequences of
 2 one or more instructions for managing electronic mail, wherein the execution of the one

3 or more sequences of the one or more instructions causes the one or more processors to
4 perform the steps of:
5 automatically generating certain criteria based on contents of a plurality of electronic
6 mail messages received over a network;
7 wherein the step of automatically generating certain criteria includes, in response to
8 determining that a threshold number of said plurality of electronic mail messages
9 have a particular content, generating one or more criteria that classifies electronic
10 mail messages that have said particular content as a first type of electronic mail;
11 receiving an electronic mail message over said network;
12 determining whether said electronic mail message satisfies said one or more criteria;
13 if said electronic mail message satisfies said one or more criteria, then processing said
14 electronic mail message as said first type of electronic mail;
15 if said electronic mail message does not satisfy said one or more criteria, then processing
16 said electronic mail message as a second type of electronic mail;
17 wherein said first type of electronic mail is processed differently than said second type of
18 electronic mail;
19 wherein the step of determining that a threshold number of said plurality of electronic
20 mail messages have a particular content includes the steps of:
21 generating message signatures for each electronic mail message of said plurality
22 of electronic mail messages, wherein each message signature includes one
23 or more signature elements, and
24 counting how many of said one or more signature elements match signature
25 elements from other message signatures; and

26 wherein at least one electronic mail message of said plurality of electronic mail
 27 messages has not been classified, before determining that a threshold number of
 28 said plurality of electronic mail messages have a particular content, as belonging
 29 to said first type.

1 54. (Previously Presented) The computer-readable medium of Claim 53 wherein the step of
 2 determining whether said electronic mail message satisfies said one or more criteria
 3 includes determining whether a message signature generated for said electronic mail
 4 message includes at least one signature element that matches a threshold number of
 5 signature elements of previously generated message signatures.

1 55. (Previously Presented) The computer-readable medium of Claim 54 wherein the step of
 2 determining whether a message signature generated for said electronic mail message
 3 includes at least one signature element that matches a threshold number of signature
 4 elements further includes determining whether a message signature generated for said
 5 electronic mail message includes at least one signature element that matches a threshold
 6 number of signature elements of previously generated message signatures that are
 7 associated with a period of time.